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RARE OFFICIAL TI EDUCATION CARTRIDGES: AN OVERVIEW AND COMMENTARY

by Charles Good
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The word RARE in this series of articles refers to command module cartirdges that were produced in limited quantities and, for the most part, only sold to the public after TI announced they were getting out of the home computer market. This education software all bears 1983 copyrights by Addison Wesley and Scott Foresman. TI was to handle the manufacturing and distribution, but very few of these cartridges ever made it to retail store shelves, and you won't find many of them commonly available at any price from today's dealers such as TEX COMP, L.L. Conner, and RAMCHARGED. Only the NUMERATION 1 module is commonly available.

The early published history of these titles is interesting. Remember, these rare cartirdges are all c1983, and most only became available in limited quantities in 1984. A full page Scott Foresman ad on page 53 of the November 1982 99ER MAGAZINE (which was published at least a month before the cover date) illustrates instruction books for STAR MAZE, SPACE JOURNEY, and PICTURE PARTS. The same ad shows two TI titles I never heard of, A DOG ON A LOG and A GHOST IN THE HOUSE. Another full page Scott Foresman ad in the December 1982 issue of 99ER shows the FRACTIONS 1 package. ALL of the rare and not so rare Scott Foresman titles (all 12 READING cartridges, the 5 MATH ACTION GAMES, and all of the MATH COURSEWORK series cartridges) are listed in the Sept 1983 99ER MAGAZINE as being available from Soft-Tex of 3 Walnut Lane, Berwyn PA at prices between $40 and $59 each.

Some of these command module titles were sold directly to the public by TI and by Scott Foresman after TI supposidly left the home computer market. A dealer ad in the September '84 issue of Micropendium lists some of the Scott Foresman titles for $25 Some titles appear in TRITON catalogs listed as "NEW" starting about 1987. We obtained ours as GRAM disk files converted from the TI COMMAND MODULE SIMULATER disks acquired by a member of the LITI user group. There are three general types of RARE educational cartridges; math games, math coursework drills, and language arts coursework drills.

In the math game modules the emphasis is on the game action or logic rather than the ability to solve specific math problems. Examples include COMPUTER MATH GAMES I, III, and IV, as well as Scott Foresman games such as PICTURE PARTS and PYRAMID BUILDER. The player is asked to solve math problems, but sometimes if the player's answer to the problem is incorrect the computer displays the correct answer and the game proceeds more or less as if the problem had been correctly answered. Many math game modules are timed. In my case this sometimes means that even though I can solve the problems, if I don't solve enough of them fast enough because of the complexity of the game action, then I lose.

Math coursework drill cartridges simulate classroom learning, and in fact many are probably best used in a classroom rather than home. The software tries to teach specific math concepts by solving sample problems for the student and then giving the student a series of problems to solve for himself. Examples are the Milliken Math Sequence series and the Scott Foresman Math Coursework series. Color graphics, music, and voice are often used to make a potentially dull drill more interesting and to reward correct student responses.

Language arts drills include rare titles in the Scott Foresman READING series. Grammar, sentence structure, proper interpretation of text, and research skills such as dictionary and encyclopedia skills are among the topics taught.

With the availability of this "new" 1983 math education software I think it is time for the many adult TI users to "return to our beginnings" and make this "new" software as well as many of the pre 1983 TI education cartridges available to our children and/or grandchildren. Dust off one of your "second" consoles and set it up for the kids. Lots of the pre 1983 products are available from dealers and newsletter ads for less than $5 each. If you have a GRAM device, you can get the rare software from us. THIS IS QUALITY STUFF, developed by two of this country's biggest publishers of elementary school textbooks. Almost all of TI's 3rd and 4th quarter 1983 television commercials and magazine ads for the 99/4A emphasized CHILDREN'S EDUCATION. The 99/4A has a unique combination of color graphics, musical sound generation, and speech synthesis not easily avialable on Apple or MS-DOS computers. Apple computers are the most common in public schools and I have seen lots of Apple education software. None of it talks! Most has no color. Barry Traver's home schooled son learned all his basic math using TI cartridges. Barry says, "I didn't teach him the math, the TI did."

Let us return now to those glory days in the 4th quarter of 1983 when the TV was full of commercials promoting the 99/4A as a tool in elementary grade education and when lots of new education software was about to become available. THAT SOFTWARE IS NOW HERE!!

DONE

RARE OFFICIAL TI EDUCATION CARTRIDGES: THE SCOTT FORESMAN MATHEMATICS COURSEWORK SERIES

reviewed by Charles Good
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I can't say enough about nice things about this software. It is, in my opion, far superior to the MILLIKEN MATH SEQUENCES TI cartridge software many of us are familiar with. When it comes to teaching students NEW mathematical concepts, as opposed to just reinforcing previously learned concepts with drills, there is nothing better than the SCOTT FORESMAN MATHEMATICS COURSEWORK SERIES. None of the basic math education software for Apple or MS-DOS computers is as good, in my opinion. You can actually sit a student down in front of the computer, start up the module, and have the computer do the complete job of teaching the student an unfamiliar math concept without any further human intervention. I have done so with my 1st grade daughter and 5th grade son, and I have talked to a couple of elementary school educators who use 99/4As and who have confirmed that these cartirdges are actually self teaching. I find this amazing! This software is computer assisted learning at its very best.

All cartridges in the MATH COURSEWORK SERIES were written by Thomas Hartsig. They seem to be designed for in classroom use, but also can be used at home. Each makes liberal use of sprites and color graphics, music, and especially speech, and each is based upon a particular theme. The powerup cartridge menu gives a choice of several activities, the last being a random review of the others. At the beginning of each activity, the student is given the choice of 1- A TEACHING EXAMPLE, or 2- PRACTICE EXERCISES. Selecting 1- really shows the magic of the cartridge. The problem is set up graphically on screen step by step. Digits float around the screen as the problem is solved, and while all this is happening the computer TALKS the student verbably and with on screen words through each step of the solution. You really have to see all of this to appreciate how good these tutorials are.

When 2- PRACTICE EXERCISES is selected a problem is displayed and the student is asked to solve it digit by digit, usually from right to left, just as the problem would be done with pencil and paper. A wrong answer gets a "try again" the first time. If the student waits too long the computer prompts on screen and verbabally "your turn" a couple of times and if no solution is attempted the computer then solves the problem. If too many problems in a series are solved incorrectly or not at all the computer says "you can do better than this" and immediately begins to display some additional TEACHING EXAMPLEs.

The better known software in this series, cartridges that are not rare, include ADDITION AND SUBTRACTION 1, ADDITION AND SUBTRACTION 2, MULTIPLICATION 1, and DIVISION 1. The activities of the "rare" c1983 cartridges are listed below. Both NUMERATION cartridges are listed in TI's last 1983 price list. None of the others are mentioned in official TI promotional literature.

NUMERATION 2- at the carnival.

This was available from some dealers in late 1983 but was less commonly available than Numeration 1.

TI, in its 1983 pamphlet "Texas Instruments Home Computer Program Library" lists this cartridge as appropriate for "late elementary, 10-12 years". 1- 4 DIGIT NUMBERS. (Write four thousand two hundred five. Which digit is in the hundred's place?)

2- COMPARE NUMBERS. (Which of two is larger?)

3- Rounding numbers (To the nearest 10s with 5 or more rounding to the next digit.)

4- 5 AND 6 DIGITS

5- 7, 8, AND 9 DIGITS

6- DAILY USE OF NUMBERS (Weigh produce on a scale and round to the nearest 10 ounces.)

7- REVIEW.

MULTIPLICATION 2- Mighty Multiplication.

This has a cute graphic of a little flying super hero, Mighty, who saves the day if you answer correctly. I wrote about this module previously under the topic of "never released software" but I subseqeuntly found it listed on some TRITON catalogs.

1- MULTIPLYING 10 AND 100. (3x10=? 3x100=?)

2- MULTIPLES OF 10 AND 100 (3x7=? 3x70=? 3x700=?)

3- 2 AND 3 DIGITS TIMES 1 DIGIT.

4- 2 DIGITS WITH RENAMING. (I used to call this "carrying".)

5- 3 DIGITS WITH RENAMING.

6- MORE THAN 1 RENAMING.

7- WORK PROBLEMS.

8- REVIEWING IT ALL

ADDITION AND SUBTRACTION 3- Adventures in Addition and Subtraction.

1- ADD 2 DIGIT NUMBERS.

2- SUBTRACT 2 DIGIT NUMBERS

3- REGROUP OBJECTS ("13 ones equals 1 ten and 3 ones.")

4- ADD WITH RENAMING

5- SUBTRACT WITH RENAMING

6- ADD 3 DIGIT NUMBERS

7- SUBTRACT 3 DIGIT NUMBERS

8- REVIEW.

NUMERATION 1- Under the Big Top.

TI considers this suitable for "early elementary 5-7 years" The cartridge was available from some dealers by the end of 1983 but I never personally saw one in the stores.

1- NUMBERS TO 9

2- COMPARE NUMBERS (3<5)

3- HOW MANY TENS

4- NUMBERS TO 99

5- NUMBERS IN ORSER ("5 is one less than 6.")

6- ORDINAL NUMBERS (First, second, third, etc.)

7- NUMBERS TO 999

8- REVIEW

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FANTASTIC FRACTIONS 1

1- WHAT IS A FRACTION

2- A FRACTION OF MANY ("How many boxes are black? How many total boxes are there? What fraction are black?)

3- EQUAL FRACTIONS (1/2 = 2/4)

4- MIXED NUMBERS (Whole number plus fraction, such as 2 1/4)

5- APPLICATIONS (Show 5 1/3 on ruler scale.)

6- REVIEW

DECIMAL DELI 2

There is reference to a DECIMAL 1 in the literature, but I havn't ever seen DECIMAL 1.

1- PLACE VALUE (ones, tens, tenths, hundredths, thousandths; 92.475 equals "ninety two and four hundred seventy five thousandths")

2- COMPARING, ORDERING ("5.374 is greater than 5.334")

3- CONTING PLACES (35.8284, four decimal places)

4- MULTIPLYING DECIMALS

5- ZEROS IN THE PRODUCT (0.04 x 0.1 = 0.004; "We need two zeros in front of the four to make three decimal places.")

6- APPLYING DECIMALS (Each roast beef sandwich costs $3.93. What is the cost of 7 sandwiches?)

****DONE****

RARE OFFICIAL TI EDUCATION CARTRIDGES: THE SCOTT FORESMAN MATH ACTION GAME SERIES

reviewed by Charles Good
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Most of these games are more fun, in my opinion, than the "Computer Math Games" series. They are probably best used in a home rather than a classroom environment, since math concepts already learned are reinforced but you aren't taught any new concepts. It is necessary to solve a math problem in order to make a move. An incorrect answer sometimes results in the computer displaying the correct answer to the problem, but you don't get an explanation of HOW to obtain the correct answer. None of these c1983 games are mentioned in any TI promotional literature I have seen. They were all, apparently, released by Scott Foresman after "Black Friday", although they are mentioned in Scott Foresman ads prior to then. All these games have on screen instructions, make good use of music and color graphics, and have three levels of difficulty, usually labeled HARD, HARDER, and HARDEST. Although originally designed to be run from cartridges, we have all these games on library disks 112b and 114a in a format that will run out of extended basic without the need for a gram device.

FROG JUMP

This game for 1 or 2 players teaches counting and reading of basic numbers. It is NOT a "frogger" type of "cross the freeway" game. You and your opponent's frogs jump around the pond from one lily pad to another. You (enter) the answer of each displayed problem. If the answer is correct your frog will jump and you win lily pads. The faster you answer the more lily pads you win. The winner is the first player to win 20 lily pads. Problems are of the "Give 3 more than 48" or "52 54 56 58 Give the next number" type.

SPACE JOURNEY

You have two minutes to guide your space ship home to earth in this one player game. To move your ship you must answer a PERCENT problem correctly such as "Give 3.157 as percent" (315.7%). before you land you must either intercept ten meteors or land on five different planets. After each correct answer you may do either. The game is not easy. If meteors hit your ship you become lost in space and the game ends. If you land on a planet some disaster usually occurs which requires you to solve extra problems to get off the planet. For example, "Your ship has engine trouble. You can repair it only if you answer two problems correctly." Finishing within the allowed two minutes isn't easy, even if you know the math!

PICTURE PARTS

This is, in my opinion, the most amusing of this group of math games. It resembles FACE MAKER. Every time you correctly answer a basic addition, subtraction, or multiplication problem you get your choice of parts to add to the face you are building on screen. Face shape, ears, nose, hat, mouth, eyes, etc are added one at a time. When you are finished you have a very amusing looking face that you yourself created.

PYRAMID PUZZLER

This is a two player game, or one person can play against the computer. The object is to be the first to climb to the top of the pyramid. If you land on your opponent's square he is pushed down one space. You get to move Left/right or up/down each time you answer a MULTIPLICATION problem correctly. Problems are basic "number fact" problems.

STAR MAZE

You move a little creature called THID through a maze to his home planet. Every time you correctly answer a division problem (no remainders) you can move THID two spaces in the maze with the arrow keys. Sometimes you bump into a BADID star that sends you further back from the end of the maze. This game is timed. The faster you solve the maze the more points you earn. You can select the time allowed (and hence the game's difficulty), 2, 3, or 4 minutes.

NUMBER BOWLING

I wrote about this game a couple of years ago as a "never released" module. Later I learned that it was sold in limited quantities. The game teaches DECIMALS AND FRACTIONS. You are asked a question and must solve it quickly. If the solution is correct you bowl your ball and the time required

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to solve the problem determines the number of pins knocked down and your score. You only get two seconds to solve the problem and get the maximum score of 10 pins. Usually I can't type the answer that fast even if I know the answer immediately, so I have never bowled a perfect game with NUMBER BOWLING. Still, it is fun to try.

DONE

RARE OFFICIAL TI EDUCATION CARTRIDGES: THE SCOTT FORESMAN READING SERIES

reviewed by Charles Good
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These modules resemble PLATO software in that they present specific language arts concepts in a text format and then ask a series of questions to text the student's knowledge of the concept. Unlike PLATO software, the Scott Foresman modules make good use of music and color graphics. The rare modules DO NOT make use of speech synthesis, unlike some of the more common cartridges in the Scott Foresman READING series. These cartridges seem to be designed for in classroom use, which may be why they were not made commonly available to the public. The "suitable age" designations below are taken from the Fall 1987 TRITON catalog which lists most of these modules.

READING TRAIL

Suitable for ages 8-12, this cartridge teaches about the characters, setting, and points of view in stories. Famous characters from the Wizard of Oz and a separate story about fishing are used to illustrate specific points.

READING POWER

Suitable for ages 8-12, this module teaches research skills involving the dictionary, encyclopedia, and library card catalog. Specifically the student learns how to find information that is organized alphabetically in these kinds of reference materials. A dective story called "The Lion's Chara" with color anamation and music is used in some of these activities.

READING RAINBOWS

This is one of the rarer of the "rare" READING modules. It has been listed in very few catalogs over the years. It teaches how things are alike, parts and wholes, and sizes. Speech synthesis is used effectively. My first grade daughter whipped through this in a very short time, so I assume it is designed for first grade (age 6).

READING WONDERS

Another of the more rare modules, READING WONDERS teaches the student to distingush between various types of fiction and non fiction. Several colorful stories are used to illustrate what is and is not historical fiction, modern realistic fiction, science fiction, biography, autobiography, and information articles. I suspect that this is probably for ages 11-13

READING ADVENTURES

This uses a variety of stories to teach, within a paragraph, main and supporting details, drawing conclusions, and sequential relationships. I have seen this one mentioned, but not described in catalogs. It looks like about ages 8-10, but I am not sure.

READING CHEERS

I would have guessed this was for 2nd grade, but my 1987 TRITON catalog says ages 8-12 (2nd grade is age 7-8). The module teaches root words with endings (lazy and lazily), contractions, and compound words.

All of the above "rare" modules are c1983. To complete the record I will briefly describe below the more commonly available 1982 Scott Foresman titles in the READING series.

READING ON

Some nicely illustrated science fiction stories illustrate the use of maps, schedules, graphs, and why and how people use them. For ages 8-9

READING FUN

There is minimal use of speech synthesis in this 2nd grade level module. Four colorful stories illustrate problems and how people solve them, why things happen, and how characters feel.

READING ROUND UP

Four stories based on an "American Wild West" theme are used. Concepts taught are figures of speech, word meaning, and idioms. The module is designed for ages 9-10.

READING FLIGHT

For ages 11-12. A neat story about an archaeological dig on a south seas island called Bolo Island teaches classifying, summarizing, and outlining information.

DONE

VERY RARE OFFICIAL TI MODULES: *COMPUTER MATH GAMES I, III, and IV*

reviewed by Charles Good
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These three Addison-Wesley education modules are each listed for $39.95 suggest retail in TI's last published 99/4A catalog dated June 1983. They are part of a series which includes the commonly available copyright 1982 COMPUTER MATH GAMES II and VI. The I, III, and IV modules have a 1983 date on their title screen.

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I obtained them as COMMAND MODULE SIMULATOR disk files (and now also as GramKracker files in the Lima UG software library), and at first I thought they had never been officially released by TI. I have never seen them advertised in Triton, Tex Comp, or Tenex catalogs. Even Mike Wright, who has more different kinds of TI modules than anybody else I know doesn't have these modules. I finally dicovered that Eunice Spooner actually has one of these modules, GAMES III, complete with TI published documentation. Even now (January 1992) it is possible to purchase GAMES III from TM Direct Marketing, but without any documentation. Larry Conner, a TI dealer who has sold lots of rare TI stuff to collectors told me that all three of these rare modules have passed through his hands. Larry said, "As I recollect, those are really neat games that make good use of the TI's special features." Apparently only TI sold very limited quantities of these modules directly for $39.95 each. Because of price I doubt if they sold very many.

Quoting from page 2 of my "VI" module's documentation:

"It is essential for all of us to know and understand how fundamental mathematics operations are performed. In order to develop this understanding, students must have the opportunity to practice, for only through practice can they develop strong mathematical skills. The Computer Math Games VI Solid State Cartridge is one of five modules of math games that can help provide this opportunity. The program was designed by Charles Lund, Supervisor of Mathematics for the St. Paul, Minnesota, public schools and the staff of Addison-Wesley Publishing company in cooperation with the staff of Texas Instruments Incorporated. The Games included in the cartridge are both fun and challenging, with an entertaining, motivating format designed to capture and hold attention."

"VI" is one of five modules?!?! The series includes I, II, III, IV, and VI, all of which have a title screen that names Charles Lund as author. There is no V. Apparently someone at Addison-Wesley or at Texas Instruments doesn't know how to count! There are some TI modules that teach this skill I believe.

The options and difficulty levels of the math games that are in these modules make them suitable for students with a wide diversity skill levels. The documentation for my "II" and "IV" modules claims suitability for school grades 1 through 9. The unreleased "I", "II", and "IV" are probably appropriate for a similarly wide range of grades.

These rare 1983 modules offer you a choice of text in five languages. (The older COMPUTER MATH GAMES II and IV are only in English.) When you PRESS ANY KEY TO BEGIN you are presented with the following options. It is suprising to see almost the entire startup menu screen filled with selections.

PRESS
1 FOR TI BASIC
2 FOR ENGLISH
3 FOR FRANCAIS
4 FOR DEUTSCH
5 FOR ITALIANO
6 FOR ESPANOL

All these language options function properly in COMPUTER MATH GAMES I. However, the Italian and Spanish options are not functional in "III" and "IV", and cause the computer to lock up. Each COMPUTER MATH GAMES module contains several distinct games. These games are described individually below. All have plenty of music and colorful screen displays.

COMPUTER MATH GAMES I:

The game of SQUARE OFF:

Two people or one person and the computer can play against each other. You are shown a grid with a dot on screen at the intersection of each set of coordinates. You can chose to have coordinate 0,0 at the lower left, with positive numbers extending to the right along the x axis and up along the y axis. Or, you can specify coordinate 0,0 to be in the middle of the screen, with positive coordinate numbers extending to the right and up and negative coordinate numbers extending down and to the left of 0,0. You can specify 2-14 rows and 2-9 columns in your coordinate system, making the game very simple or very complicated.

Each player alternately inputs a set of adjacent coordinates in the form 0,0,0,1 (position 0,0 and position 0,1), and the computer draws a line between these two dots on screen. If a mistake is made and the entered coordinates do not exist or are not adjacent or already have a line between them the player is given a second chance. Then it is the other player's turn. The object of the game is to close boxes by drawing the fourth side of the box and to prevent your opponent from doing the same. When you close a box you get a free turn. The player who closes the most boxes wins.

This game gives practice using an X-Y axis coordinate system and in the use of negative numbers. To win requires a lot of thought and strategy. I enjoy this game. The computer is a challenging opponent. So are some of my children.

The game of DOT-DOT-PLOT:

This is for one player. You are again presented with a coordinate system, this time with only the X and Y axes showing. There are initially no on screen dots at each coordinate junction. You have your choice of putting the 0,0 location at the extreme bottom left and having only positive numbers on the X-Y axes, or placing 0,0 in the center of the screen and having both positive and negative numbers extend up/down and right/left from 0,0.

You are to help the computer draw a picture. Your choices are Pine Tree, Airplane, Lobster, Dog, Car, Rabbit, Castle, or "Any of these". The computer puts the first dot on screen and you specify the coordinates of this dot. The next dot is then displayed and you specify the coordinates of the second dot. The computer then draws a line between the

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previous dot and the new dot. Another dot is then displayed, and when you identify its coordinates properly a line is drawn from the previous line to this new dot. In this way your picture is drawn "dot-to-dot" style until it is complete. When the picture is finished you are given a total of right and wrong guesses and told the total number of dots in your picture. The airplane, for example, takes 20 dots with connecting lines.

You need a good monitor for this game. It is sometimes difficult by sight alone to accurately move from the first blinking dot of the new picture in the middle of an otherwise nearly empty screen back to the edge of the screen where the X and Y axes are located and get an accurate fix on the location of the dot. It is easier with subsequent dots, because you have the location of earlier dots to help guide you.

The game of MATH BOXES:

This game requires two human players. First you input the player's names and select the type of number;

1- Whole numbers (all positive)
2- Integers (whole positive and/or negative numbers)
3- Decimals
4- Simple fractions

Then you select the problem type (+-*/). Finally, you select the size range of each of the two numbers in the problem (from -999 to +9999 if "Integers" is selected). The screen then displays 12 math problems arranged in three rows and four columns. The first player selects two adjacent problems to solve and if correct gets a line drawn between the two problems. If incorrect, the opposing player gets the line. The computer gives different colors to the lines of the two players. The object of the game is to draw a box with these lines and prevent your opponent from doing so.

Depending on the options selected at the beginning of the game, the game can be "gosh darn hard" even for me, or easy enough for my first grade daughter to play successfully.

The game of BEANS AND PITS:

This game requires two human players and gives practice in interpreting numbers based on hundreds, tens, ones, tenths, and hundredths. The computer randomly transfers beans from a small pits (holes) to a combination of large and small pits. The large pits represent a number composed of 100's, 10's, ones, etc. Beans distributed to large pits stay there. Beans in small pits have to be cleared out so that eventually they are all in the large pits. The first player to completely clear out his small pits is the winner. This sounds confusing, and it is. However, the computer does most of the work of moving pits about between pits and declaring a winner, so the game is in fact fairly easy to play.

After a winner is declared, each player is asked the "number" represented by the beans in his large pits. If there are 5 beans in the "1" pit, 8 beans in the ".1" pit, and 2 in the ".01" pit the correct answer is 5.82, but being able to answer correctly has nothing to do with winning or losing. The winner and loser are determined randomly by the computer. Learning how to determine the winner's and looer's "number" is the only mathematical learning experience of the game, but has nothing to do with the random win/lose chances.

I am not terribly impressed with this particular game.

COMPUTER MATH GAMES III

These are all timed card games. A player gets 30 seconds to come up with the correct answer of the opponent gets the point. Some but not all of the games suffer from the anomaly of not having aces or face cards in the deck. Instead, players sometimes get to play the 11 of spades, 12 of hearts, 13 of clubs, etc. If mistakes are made, the correct answer is NOT indicated in some of these games. In most of these games it isn't actually necessary to solve the math problems in order to win the game. Winning is by luck, and if you can't compute your score, the computer does it for you. Knowing WHY you won (or lost) and have the

The game of WAR: (2 human players)

Each player in turn is shown two cards and asked to pick the larger of the two (eg. 10 of spades vs. 12 of clubs) by designating the card on the right or left of the screen display. A correct answer is worth one point. If the cards are of equal value and the player correctly recognizes this, three more cards are dealt and the player is asked to indicate the higher of the last two cars dealt. In this case the problem is worth 4 points. The player with the most points wins. In case of a tie, the shortest elapsed time determines the winner.

This game is suitable for kindergarten and first graders. It teaches RIGHT, LEFT, and number recognition from 1 to 13.

The game of FLASH: (1 or 2 players) You get to select the maximum value on the cards (2-13, no 1's). Next the type of problem is selected: 1-Arithmetic 2-Reduce the fractions 3-Squared arithmetic

If you select "1-Arithmetic" you then get to select addition, subtraction, multiplication, or division. The first three are intiger (whole number) problems with intiger answers. Division requires that you specify an integer quotent (always at least 1, never 0) and an integer remainder. For example, 6 of clubs divided by 4 of spades gives a quotient of 1 and a remainder of 2.

"3-Reduce the Fraction" presents a fraction (numerator-slash-denominator) and asks for the reduced form as a single fraction. For example, the game accepts "10/9", not 1 1/9, as the reduced form of "10/9".

"3-Squared Arithmetic" gives you the additional choice of 1-Addition or 2-Subtraction. You have to calculate the square of the displyed problem, as in (10-4) 2. You need to know your MULTIPLICATION number facts in addition to your addition/subtraction facts

The game of IN BETWEEN: (1 or 2 players)

The highest card in the deck can be between 3 and 13 (no aces or deuces). The computer displays 3 cards and asks. "Is

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the middle card between the other two in value? 1-Yes 2-No". If the display is 9-7-7, the correct answer is NO. As does WAR, this game teaches number recognition and also the relative order of the recognied numbers.

The game of TWENTY-ONE: (1-3 players).

The computer is dealer and an additional player. The dealer's complete hand is shown at the start of each hand with one dealer card not showing. Players are given 2 cards and asked if they want more cards. The usual Blackjack rules apply. This is the only game where face cards are so identified (as J,Q, and K instead of 11, 12, and 13). When the deck is exhausted the computer reshuffles the cards and play resumes.

There is no betting. Players and the dealer just win or lose hands indefinately until they tire of the game. Other than the lack of betting the game is very realistic. It is as good as any of the other "Blackjack" games written for the TI.

The game of ZERO: (1-3 players)

Here the red cards have positive points and the black cards have negative points. The game is played like TWENTY ONE or blackjack, except that the object of the game is to have a score as close to zero as possible.

COMPUTER MATH GAMES IV

The game of NIM 25: (one player against the computer)

This is the old "pick up anywhere from 1 to x blocks and the person who picks up the last block wins" game. Barry Traver has discussed the mathematical basis behind this game in recent issues of his disk magazine.

There are 25 consecutively numbered blocks to be picked up. Number 25 is the last to go. You are given the option to go first or second and asked to chose the maximum number of pieces that can be picked up in a turn (max of 2-25). Unless you learn the secret the computer will usually win. Math skills are not needed to play or win, but it is fun to try and figure out the number of the highest numbered block that will be left on screen after each "pick up".

The game of MATH DARTS: (2-3 players)

You can select the number of players, the type of math problem (+-*-), and the maximum and minimum possible values for the numbers in the FIRST NUMBER +-*- SECOND NUMBER problems. Once ranges are selected, the computer randomly puts 10 numbers within the range on the left side of the screen as a target. Opitonally, the players can select the specific numbers to be placed on the target. A colorful man appears and throws two darts at the target. The numbers hit by the darts are the two numbers in the math problem. You get 10 seconds to solve each problem.

The game of 500: (2-4 players)

This game gives practice in recognition and interpretation of decimal numbers. You see a nice graphic of a baseball pitcher throwing the ball, which stops midway towards the batter. You are then given a problem to solve. If solved correctly within 10 seconds the batter hits the ball in the air. If solved incorrectly the batter hits a grounder.. You can chose the maximum number of digits to the right and to the left of the decimal place. Problems are of three types.

1- "What is the compact form of 700+50+9+.4+.03?" The answer is 759.43.

2- "What is the expanded form of 509.43?" The correct answer is 500+9+.4+.03.

3- "In the number 711.5 the number in the tens place is what digit?" The answer is one.

The game of WOODCHUCK: (1-4 players)

You can select +-* or / problems, and you can specify the high and low range of numbers to be placed on each of two dice. Then either the computer randomly generates numbers within this range on the dice or you select specific numbers within the ranges to be on the dice. You also have the option on your turn to roll the dice or to pass. Math problems ask you to +-* or / the numbers on the two dice. The answer is the number of points you earn, and your goal is to accumulate a specified number of points. Just to make things interesting, every now and then a dragon appears on the dice when they are rolled. The dragon eats all of a player's points and the player must start over from zero. The dragon makes this game really maddening!

SUMMARY

There is a lot of variety in these games. I like some better than others. They are all entertaining and they all make good use of music and color graphics.

DONE

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***** TI-101 *****

OUR 4/A UNIVERSITY

by Jack Sughrue
Box 459
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[BB&P Editor's note: This is the first in a series of articles about the 99/4A and public education to be initially published in this newsletter by Jack Sughrue. Jack teaches third grade. In the cover letter that accompanied this article Jack says, "In the future I want to explore holism up to the ways computers can be used in the class. Then I'd like to show the variety of ways the TI can be an important part of any child's education (and adults, too) by giving many specific applications through modules, disks, and tapes and even combinations of all (and not discounting direct applications in the form of programming)."]

#1 Corpus

Historical Perspective

The corpus calosum is that wonderful band of billions of nerve fibers connecting the hemispheres of the brain. Forty years ago that band was surgically severed to contain *grand mal* seizures in epileptic patients.

That was the beginning of a profound revolution in education that is quietly (though, at times, quite noisily) continuing through today.

Through the massive research done since that fateful slice, we, as a society, have learned more in the past quarter century about how people learn than we knew about the subject in all the tens of centuries humans have considered the process.

This educational revolution was not without its prophets. John Dewey was one. Today there are many great teachers out there operating under the umbrellas of "Process Learning," "Open Methodologies," "Whole-brain Teaching," "Open Classrooms," "Science/Logic Approach," and piles of other names, including "Whole Language." The last is probably having the most profound influence on the real education in the English-speaking World as any philosophical approach since Horace Mann "Manndated" public education in America so long ago. (So long ago that we take free, public education for all as a given, as an inalienable right.)

But there is a problem.

(Isn't there always?)

When the Germans first devised an efficient way of organizing a mass education in the 19th Century, they decided to make a step-by-step system of completing a given body of work at a given chronological year of a child's life. Thus, 6-year-olds go through a first grade (and an artificially-created, adult-generated curriculum). After completing this predetermined set of tasks, the child turns seven and, if lucky, moves into the second grade where another set of artificial goals awaits HIM (no girls, of course).

And so on.

The fact that 7-year-olds are not developmentally on the exact step at any time (any more than all the 47-year-olds are) made no difference to the people operating this 19th Century system. In order to protect the system, an achievement hierarchy was developed, which has come down to us, unfortunately, even to today in too many schools. It is a system that never worked because it created an invisible - though profound - class system. The system created a society of elitists, of average Dicks and Janes, of losers. The basal reader system (unfortunately still in place in most American schools) requires that the classroom be divided into three groups: the good readers, the average readers, the poor readers (sometimes called Bluebirds, Robins, and Snowy Egrets - or whatever). But you know and I know that those groups, begun in kindergarten and carried all through elementary school, created what are perceived as the smart snobs, the struggling middle class, and the dumb (and bad) kids. By the time official tracking takes place in junior high (middle school) the system is firmly in place. You'll never guess which group has the greatest number of dropouts or which group has the greatest number of kids who go on to advanced degrees (followed by the best jobs). These determinations for the most part are made in the primary grades in elementary school.

The same 19th-Century system also created a hierarchy of adults. Prior to the institutionalization of education the teacher was the most important adult in the learning process. After the system overtook the world, administrators became the most important part of the system. This is usually followed by the operational staff. (Go into ANY school and see if that institution operates around the things that secretaries and custodians require before all else or whether the teachers get top priority. Surprise!)

In this topsy-turvy setup, highly-paid administrators make the decisions. These decisions (from administrators operating in an entirely separate building from a school, believe it or not) are then handed down to other adminstrators who have offices and secretaries. The decisions are then handed down to administrators who are in schools (principals, which means, by the way "first or highest in rank and importance"). In secondary schools these decisions are usually then handed down to department heads. Then - possibly - the teachers are told. These are the same teachers who adminstrators love to hold "accountable," even though they have been excluded from the decision making. Doesn't this "accountability without authority" have a bit of the ring of "taxation without representation" about it?

Generally speaking, administrators - who have the most opportunity and time to learn about all the masses of reseach on how children learn - know the least. They are divorced from the youngsters and from the realities of day-to-day education. They don't realize, for example, that the clientele has changed. That the students today are not made the same way, intellectually and emotionally and socially, that youngsters 25 years ago were. That the horrors of nuclear war, AIDS, street violence, fanatic consumerism,

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drugs, and so on were not part of our growing up, of our everyday consciousness and reality. That when I was growing up the attention span of youngsters in ELEMENTARY SCHOOL was estimated to be a little over an hour; that seven years ago for students in K-12 it was 22 minutes; that last year for that same group it was 10.8 minutes!

And education is a big - a humongous! - business. Publishers determine the curriculum in America and sell their goods to administrators who foist these materials upon the trained classroom professionals. This is a multi-billion dollar business and one that stomps out any attempt at teacher input for better ways of doing things in the classroom. Such changes may cause these influential profiteers to lose money; influential bureaucrats to lose power.

Millions of Americans sense (even if they don't have statistics at hand) that something is drastically wrong with schools that still use 19th-Century methods and materials to teach 21st-Century life skills and that still put profits and political power (inside and outside the schools) ahead of the education of our children. These parents and other friends of pulic education are afraid for America, for the Earth. For all our children.

Some parents (former Bluebirds) have the lucky financial fortune to put their children into expensive private schools. Others have sought to find some solace and protection from the outside world by placing their youngsters in religious schools where they hope their own values will be inculcated. Others, who have the trained academic and intellectual background (like Barry Traver) teach their children at home. The vast majority of us parents are, however, just working class stiffs who want and expect public education to do its job by our kids.

But, wait a minute!

Aren't we the same society that put a man on the Moon just because Jack Kennedy set us that national goal? Didn't we (not England, not Chile, not Russia, not China, not Iraq) send those Voyager spacecraft out into the wilderness of our Solar System? Aren't we the country with the most Nobel winners?

But those achievements all stemmed from a society that prized education. Weren't these and most of the other masterful achievements of our nation developed during a high level of caring for our youngsters (our future), and of developing a liberal climate of risk-taking and experimentation?

What has happened since Nixon's Presidency to change all this? In spite of the lip service given to education by our recent Presidents, the State of the Union, educationally, has regressed catastrophically following the Kennedy/Johnson Era. And, because federal and state programs to assist and enhance the education of our nation's greatest resource - it's children - has virtually dried up and property taxes are the primary source of funding education, teacher bashing has become a national pastime. Blaming the teachers (the lower paid members of the staff who are not allowed to make important educational decisions nor even to give input in most cases) is like blaming the production line worker for the stupid concepts American car manufacturers have been promulgating. As a matter of fact, it is an interesting solution on the part of these rich conservatives to save American business (and, thus, America) by laying off the workers, as if they in some way were to blame for the decision-makers' gross and blatant stupidities.

That, of course, is another story.

There is a revolution happening in American education, and it will prove to be the saving of our nation. This revolution has many names and takes many forms, but it has a commonality: holism. It's an idea whose time is long overdue, and your TI has its place in this scheme of things. We'll begin to look at those next time in TI-101.

DONE

FRUEH WARE (pronounced FREE WARE)
by Andy Frueh
Lima Ohio User Group

Distributed with this newsletter is a flippy disk, each side of which contains software written by me. Since it wouldn't be fair to review my own works, what follows is a description of each.

Phantom of the Opera II

My music program based on the musical "Phantom of the Opera" has broved to be fairly popular. Now I offer a sequel of sorts. "Phantom II" adds 2 new songs, better reproduction of the original music, and a much needed graphic. The tutorial "Songbook" explaining how I programed "Phantom" is still there, along with a new synopsis that explains the music and the plot of this smash Bradway show. "Frueh ware" donations are gratefully accepted.

DV Manager v3.01

This is the third incarnation of a program that previously had flopped. To date, I have received only one or two donations. I understand why it failed; lack of features and poor design. Hopefully I'll change things with this new design.

Being a user of TI-Writer, I have taken interest in the complaints of other users. These mainly have to do with the lack of features, or TI-Writer lacking the ability to do many simple tasks. There have been many stand alone utilities for TI-Writer. Most of these do things such as stripping the carriage return marks or splitting up a large file. The bad thing is, they do one thing and one things only, and their interface is usually clumsy. What do I mean by "interface?" In the clone world, a program interface is how the program gives you information and how it lets you respond.

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The ideal interface for the one SSSD disk system 40 owner is the 40-column screen, since it most efficiently uses the screen. The 32x24 mode usually in Extended BASIC is awful.

Haven't you ever wished you could print a file with or without dot commands, view it, copy it under a different name (or the same name to a different disk), delete it or count its words and lines and still be able to freely return to your word processor, or any other Editor/Assembler PROGRAM file? DV Manager ("DVM") does this and more using simple menus and a 40 column screen (using Brad Snyder's screen routines in Extended BASIC). Of course, since this is an Extended BASIC program, it doesn't have the flying speed of Assembly, but the features that it contains, along with its ease-of-use, make up for the loss of speed.

DVM allows you to do several things with your text files. By "text file" I mean any Display Variable 80 file compatible with the Funnelweb or TI Writer editors.

Some of the features DVM includes are: viewing a file, printing with the option of printing without dot commands, copy text files, compare, delete (any unprotected file), view or print catalog (prints in sub/super script so most catalogs will fit on a disk envelope), count words, search for a string of text, and create/edit up to two 66 line pages of text.

Some "niceties" are included as well. These features include the ability to set your own screen colors and load any E/A "PROGRAM" file. For example, you could load DVM using Disk Review of Funnelweb, work with DVM, then return to Funnelweb by loading the FW file. You may also quit to the title screen or extended basic, or boot a DSK1.LOAD. I have tested the program and it is crash proof and bug free (I hope).

Docs are on the disk. I am asking a $10 "Frueh ware" donation if you like DVM. For an extra $2 I will send you a nice printed manual. Money received goes into my college fund. I am about to start as a freshman at O.S.U. Lima, so the Jaguar and Florida condo will have to wait. Please send whatever you can. I welcome comments and <u>greatly</u> appreciate your support.

DONE

LETTER TO THE EDITOR

Asgard Software
P.O. Box 10306
Rockville MD 20849
Jan 4, 1992

Dear Charlie,

I'm writing to correct a point in your most recent issue of Bits Bytes & Pixels. [Charles Good's note: This refers to separate reviews of DISK O' PYRATES published by Andy Frueh and Charles Good in the Jan 1992 issue of BB&P.]

I don't disagree with any of the points of the review, and I accept the charge, with my apologies, that the advertising is misleading - I will endeavor to correct it in the next revision of that catalog. However, I would like to add that the documentation was provided to us by Ken, who insists on using TPA for this purpose. The resulting masters have always been difficult to duplicate (partly because they had to be reduced to fit our standard booklet format. Occasionally, copies are produced that cut off a column or two. We would be happy to replace such manuals.

My only points of contention are with your own postscript. I was somewhat taken aback with your assertion that, "Asgard is no longer in the picture, nor are Asgard's past advertising claims." The product is indeed currently distributed by Notung, but by agreement with Ken, it is also being manufactured and distrubuted by Asgard. I don't know where you possibly got the idea that the situation was otherwise - feel free to contact Ken for verification on this. [Charles Good's note: According to my written notes taken of Ken's public seminar at the Nov 3, 1991 Chicago TI Faire Ken said, "When my contract with Asgard expired I decided to market DISK O' PYRATES myself so that I could keep a larger share of the profits." Also, the c1991 documentation that came with the DISK O' PYRATES that I purchased at the Chicago Faire, makes no mention of Asgard, prominately displays the Notung Software name and address, and says on the back page guarantee statement "Notung Software, the sole manufacturer of this program ....."]

I agree with your other comments on the product - I too thought it was beautiful and novel when Ken first showed it to me over 3 years ago. I was more then happy to market it, and my faith in it prompted me to invest in several advertisements in MICROpendium, as well as continual coverage in special mailings and catalogs (including the current Asgard Graphics catalog enclosed). Dispite quite a bit of advertising, a few reviews, and some slightly inflated product claims, the package has never sold well at all. In fact, the results have long been disappointing to both Ken and I - dispite the fact the package oozes quality. While I may be off-base, I believe Ken's disappointment (and certainly my own) was the lack of notice paid to this package by the community, and not my efforts to gain some attention for it.

At this time, and for the forseeable future, DISK O' PYRATES will be jointly offered by both Asgard Software and Notung Software - at the same price. Thank you.

Christopher Bobbitt
General Manager

DONE

OOPS

Micropendium isn't alone in getting title page dates incorrect. The previous issue of BB&P was dated January 1991. This issue has the correct year after "February".

DONE